

CLAIMS

What is claimed is:

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1. A wireless mobile phone comprising:

a transceiver for transmitting and receiving signals;

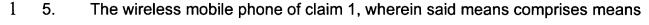
a plurality of sensors to sense and output blood flow rate data of a user holding the wireless mobile phone, with the sensors being distributively disposed at a plurality of locations of the wireless mobile phone; and

means coupled to the sensors to infer a holding pattern of the wireless mobile phone and to generate a heart rate of the user using a subset of the blood flow rate data output by said sensors, based at least in part on the inferred holding pattern.

- 2. The wireless mobile phone of claim 1, wherein the sensors comprise a first and a second subset disposed along a first and a second edge of said wireless mobile to allow different subsets of said sensors to be primarily relied upon for sensing data for different potential holding patterns of said wireless mobile.
- 1 3. The wireless mobile phone of claim 2, wherein said subsets comprise a first 2 and a second subset to be primarily relied upon for sensing data for a left hand and
- 3 a right hand holding pattern.
- 1 4. The wireless mobile phone of claim 1, wherein said means comprises means
- 2 to compare sensing data being received from said sensors against a plurality of
- 3 reference characteristic profiles.







- 2 to select a set of weights to be applied to normalize sensing data received from said
- 3 sensors.
- 1 The wireless mobile phone of claim 1, wherein said means comprises means
- 2 to request a user to confirm a generated heart rate in a calibration mode of
- 3 operation.

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7.` The wireless mobile phone of claim 1, wherein said means comprises a plurality of programming instructions designed to perform said inferrence of a holding pattern of the wireless mobile phone and said generation of a heart rate of

- 4 the user.
- 1 8. The wireless mobile phone of claim 1, wherein said means comprises
- 2 circuitry for performing said inferrence of a holding pattern of the wireless mobile
- 3 phone and said generation of a heart rate of the user.
- 1 9. A palm sized personal digital assistant (PDA) comprising:
- 2 memory;
- 3 a processor coupled to the memory;
- 4 a plurality of sensors to sense and output blood flow rate data of a user
- 5 holding the PDA, with the sensors being distributively disposed at a plurality of
- 6 locations of the PDA; and
- 7 means coupled to the sensors to infer a holding pattern of the PDA and to
- 8 generate a heart rate of the user using a subset of the blood flow rate data output by
- 9 said sensors, based at least in part on the inferred holding pattern.



- The PDA of claim 9, wherein the sensors comprise a first and a second 1
- 2 subset disposed along a first and a second edge of said PDA to allow different
- 3 subsets of said sensors to be primarily relied upon for sensing data for different
- 4 potential holding patterns of said PDA.
- 1 The PDA of claim 10, wherein said subsets comprise a first and a second 11.
- 2 subset to be primarily relied upon for sensing data for a left hand and a right hand
- 3 holding pattern\
- 1 12. The PDA of claim 9, wherein said means comprises means to compare
- 2 sensing data being received from said sensors against a plurality of-reference
- 3 characteristic profiles.
- 1 13. The PDA of claim 9, wherein said means comprises means to select a set of
- 2 weights to be applied to normalize sensing data received from said sensors.
- 1 14. The PDA of claim 9, wherein said means comprises means to request a user
- 2 to confirm a generated heart rate in a calibration mode of operation.

- The PDA of claim 9, wherein said means comprises a plurality of 15. programming instructions designed to perform said inferrence of a holding pattern of
- 3 the PDA and said generation of a heart rate of the user.





2 said inferrence of a holding pattern of the PDA and said generation of a heart rate of

3 the user.

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17. A mobile client device comprising:

a plurality of sensors to sense and output blood flow rate data of a user holding the mobile client device, with the sensors being distributively disposed at a plurality of locations of the mobile client device; and

means coupled to the sensors to infer a holding pattern of the mobile client device and to generate a heart rate of the user using a subset of the blood flow rate data output by said sensors, based at least in part on the inferred holding pattern.

- 18. The mobile client device of claim 17, wherein the sensors comprise a first and a second subset disposed along a first and a second edge of said mobile client device to allow different subsets of said sensors to be primarily relied upon for
- 4 sensing data for different potential holding patterns of said mobile client device.
- 1 19. The mobile client device of claim 17, wherein said means comprises means
- 2 to compare sensing data being received from said sensors against a plurality of
- 3 reference sensing data profiles.
- 1 20. The mobile client device of claim 17, wherein said means comprises means
- 2 to select a set of weights to be applied to normalize sensing data received from said
- 3 sensors.

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